

**Program Performance and Management (PPM)
for the National Energy Technology Laboratory (NETL)**

DE-SO26-08000663

The goal of this procurement is to provide PPM Services for the NETL. The following format has been used for this Statement of Work (SOW):

1.0	Objectives
2.0	Scope of Work
3.0	Task Descriptions
4.0	Glossary

1.0 OBJECTIVES

The objective of this solicitation is to obtain services to complement the efforts of federal staff to administer, execute, implement, monitor, manage and evaluate RD&D programs and provide general assistance for other program-related activities.

Task assignments for this service contract focus on program initiatives under the direction of the NETL Office that supports the sponsoring organization. Sponsoring organizations include but are not limited to the DOE Offices of FE, EERE and OE. Program initiatives are national in scope and emphasize partnerships with private industry, academia, state governments, and other governmental stakeholders to create commercially-viable technological solutions to national energy and environmental problems. Within the NETL organizational structure, task assignments for this contract will be initiated only at the direction of NETL Offices.

NETL program management functions are accomplished in conjunction with established planning groups such as Technology Managers and crosscutting teams at NETL, as well as HQ DOE Program Managers. NETL project management divisions provide support and input to program activities in accordance with their areas of technology or programmatic responsibilities. Project management division personnel will primarily oversee the work assignments initiated by NETL Offices. Program Management activities require significant internal interactions and communication among other NETL staff, including Technology Managers, Technology Teams, other NETL Managers, personnel involved in program development and other support activities/services. Therefore, maintaining (and developing) seamless and compatible communication and information transfer systems, internal and external to NETL, should be considered a primary requisite under this solicitation (which includes all existing and future computer software systems).

To execute work assignments, the contractor must effectively assess and adjust staffing to respond to the changing programmatic requirements inherent to cutting-edge research organizations such as NETL. Flexibility in staffing is a key objective of the overall contract and requires that managers and staff remain current on requirements and technical advancements. The Contractor shall have a sufficient level of expertise (on and off site) to successfully support the management and integration of all stages of science and technology development leading to commercially viable solutions. Through this solicitation, NETL seeks to access a best in class RD&D support service organization(s) that can assist NETL conduct its mission resulting in desired program outcomes and compliance with performance expectations.

In addition, NETL requires that the Contractor uses effective and efficient management structures, systems, and operations that are cost effective. The Contractor shall plan and execute work in a manner that will foster the objective demonstration of competence in management areas such as (1) development of approach, (2) problem resolution, (3) coordination, (4) innovation, and (5) manpower management. All work shall be conducted in a manner that shows continual improvements.

2.0 SCOPE of WORK

The work to be conducted under this contract specifically involves services to support planning, executing and assessing NETL **programs**. A *program* is an organized set of ongoing activities directed toward a common purpose or goal undertaken in support of an assigned mission area. Typically, a program is a group or portfolio of related projects managed in a coordinated way to accomplish broad goals over a relatively long period of time (e.g., a 10 to 15 year planning horizon), to which individual projects contribute. Requirements, governing regulations, internal and external stakeholders, implementation strategies, and many other factors can vary among the programs. The RD&D programs and subprogram designations are directly linked to the appropriations and budget process and Government financial accounting system. Program budgeting and planning is lead by the DOE HQ program offices and NETL federal personnel work directly with DOE HQ personnel to plan, execute and assess program initiatives. In general, the services require a high level of technical expertise in scientific, engineering, business and policy disciplines needed for in-depth understanding of advanced technologies and complex systems, program and portfolio management expertise to effectively execute program-related activities, and expertise to effectively manage program performance, information and communications.

The Contractor shall provide technical and administrative support services for program planning, execution and assessment as well as provide general assistance supporting other program-related activities, such as communications and outreach. The Contractor shall manage their workforce and the overall execution of work to ensure appropriate (on and off site) staffing of individual tasks, integration and quality control of work products, communications among tasks, and coordination within the program organizational structure.

Task assignments for this contract shall focus on services that support program management functions and will provide support to all NETL organizational elements including, but not limited to, the Office of Systems Analysis and Planning, the Strategic Center for Natural Gas and Oil, the Strategic Center for Coal, the Project Management Center and the Office of Research and Development. As a point of reference, the following list delineates the current (2008) range of program areas supported by the NETL offices, which include subprogram portfolios totaling more than 1,800 individual projects. The scope of task assignments includes, but is not limited to, these program areas and may vary annually with the Government budget cycle.

- *Coal and Power Systems* – program technical areas include major demonstrations for the Clean Coal Power Initiative and FutureGen, advanced combustion technologies, integrated gasification combined cycle technologies, carbon capture and sequestration, environmental and water resources technologies, fuel cells, advanced turbines, hybrid technologies, coal fuels and hydrogen and advanced research for materials, instrumentation and controls, and modeling. (Approximately 40 percent of work assignments)
- *Natural Gas and Oil Technology* – program technical areas include natural gas exploration, production, transmission, and storage; natural gas methane hydrates; oil exploration and production, oil and gas effective environmental protections, and reservoir life extension/management; and EPart Section 999 Ultra Deepwater initiatives. (Approximately 10 percent of work assignments)
- *Energy Efficiency and Renewable Energy*– program technical areas include building technologies, vehicle technologies, Federal Energy Management Program, industrial technologies, and weatherization and intergovernmental programs. (Approximately 35 percent of work assignments)
- *Electricity Delivery and Energy Reliability* – program technical areas include analyses to examine and maintain the integrity of the energy infrastructure (e.g., electricity production, processing, transport, storage and utilization). Current activities are in transmission and distribution R&D; planning, siting and analysis; and infrastructure, security and energy restoration. (Approximately 10percent of work assignments)
- *Other Energy Initiatives* – program technical areas support national-level initiatives as requested from other DOE Offices (e.g., National Nuclear Security Administration, Engineering and Construction Management, Legacy Management; and Environmental Management) and

application of NETL core competencies in the areas of critical infrastructure interdependencies; technology transfer; data/product sharing; all-hazards emergency response; non-proliferation of hazardous nuclear material. (Approximately 5 percent of work assignments)

The work to be conducted under the PPM services contract will be defined primarily (but not solely) by the following characteristics:

- Provide program management support services for the NETL workforce (primarily Office level personnel, such as Program Managers).
- Utilize both on-site and off-site Contractor personnel to accomplish work via a flexible workforce,
- Conduct complex administrative and technical tasks that support multiple program areas. These tasks are anticipated to require integration and synthesis of information and workflow. The desired result of these cross-cutting and integrated efforts is efficient and effective management of initiatives throughout the lifetime of the task,
- Consist of predictable, longer-term tasks with generally defined end objectives, but composed of smaller, serial subtasks (with more defined objectives) in which the results and deliverables of previous subtasks affect the design, deliverables, and specific objectives of subsequent subtasks,
- Provides for shorter-term tasks requiring unique and/or specialized resources and facilities to address specific technology issues,
- Ensure that NETL has access to a diversity of high quality scientists, engineers, and program management administrators with expertise appropriate to the laboratory's mission.

It is anticipated that the work scope will support the following six functional areas (to be described in more detail in Sections 2.1 through 2.6): 1.) Strategic Program Planning, 2.) Expert Portfolio Analysis and Technology Transfer/Deployment, 3.) Program Analysis and Development, 4.) Program Review and Performance Assessments, 5.) Program Support – Processes, Practices and Procedures, and 6.) Program Outreach and Communications. The contractor shall manage their workforce and the overall execution of work to ensure appropriate staffing of individual tasks, integration of work products, communications among tasks, and coordination within the program organizational structure.

2.1 Strategic Program Planning

The Contractor shall provide technical and management expertise to assist in program-specific planning activities that are conducted annually in conjunction with the Government budget cycle. In general, these work elements are predictable and are executed in accordance with established requirements, formats, content, and delivery schedules. Program planning efforts are used to guide detailed planning at the project level. Work elements include, but are not limited to, the following activities:

- a. Prepares program documentation (e.g., Strategic Plans, Multi-Year Plans, Annual Operating Plans, Program level financial planning) in the support of budget and strategy planning.
- b. Develops supporting documentation for annual and out year planning of program initiatives, typically acquired through competitive solicitations, and the tracking and measurement of actual performance against pre-determined annual targets.
- c. Prepares supporting documentation for roadmaps and program-specific planning mechanisms for programs and technology areas that include, but are not limited to, those identified in Section 2.0 above.
- d. Prepares/performs cost planning and variance analysis for technology areas.

2.2 Expert Portfolio Analysis and Technology Transfer/Deployment

The Contractor shall provide technical expertise that is appropriate to the program and technology area to develop analyses and reports required to document and enhance progress toward goals and objectives. These work elements are primarily conducted for specific technologies and current program sub-elements, and are used by the Federal staff in program analysis and development. Work elements include, but are not limited to, the following activities:

- a. Conducts research project portfolio assessments of various program elements and identifies opportunities for enhanced performance.
- b. Conducts post-project assessments of selected projects and demonstrations, analyzes and determines market penetration, and assists in identifying technology performance improvements derived from RD&D initiatives.
- c. Develops expert reports describing the performance of the research and technology efforts for dissemination to research, regulatory, academic and business communities.
- d. Identifies key barriers to implementation of program elements and evaluates wide ranges of actions to potentially lower barriers to attaining goals and objectives.
- e. Develops supporting documentation for energy conservation standards.

2.3 *Program Analysis and Development*

The Contractor shall provide broad technical expertise that is appropriate to the program and technology area to support the Federal staff in analyzing the progress of key program components and internal and external factors affecting planned activities. Results of assigned work elements are primarily used by Federal program officials for communicating among program stakeholders and supporting decisions that may result in changes to current program plans and the technology portfolio. Work elements include, but are not limited to, the following activities:

- a. Examines the status of key state-of-the-art technologies, market trends, legislative and regulatory proposals.
- b. Conducts analyses related to environmental and other regulatory issues, including ascertaining the impact of proposed and existing legislation with respect to the intended applications of specified technologies, and provides recommendations to development programs to address those issues.
- c. Provides information that will be used in program decision-making among alternative technology investment choices by performing limited life cycle, economic/cost, technical assessments and engineering analyses.
- d. Information/knowledge management expertise to support planning of strategies, mechanisms and events to disseminate information to program and project personnel.

2.4 *Program Review and Performance Assessments*

The Contractor shall facilitate and provide technical and management expertise for program reviews and budget planning, performance assessments, and progress measurement. Work elements include, but are not limited to, the following activities:

- a. Develops and provides supporting documentation, including presentation materials, for program reviews associated with the budget planning processes, including defining, justifying and supporting the mission need for program initiatives.

- b. Measures, maintains, and documents actual progress achieved against quarterly, annual, intermediate and long-term program and project performance targets e.g., Program Assessment Rating Tool (PART), Government Performance Results Act (GPRA), Joule milestones, and the President's Management Agenda (PMA).
- c. Prepares documents supporting National Environmental Policy Act (NEPA) compliance, such as, Programmatic Environmental Impact Statements (PEIS), Environmental Assessments, Records of Decision, Findings of No Significant Impact, Mitigation Action Plans, and other related documents, coordinates and supports public scoping meetings, public hearings and other public forums. [Note: These efforts are not to develop Environmental Impact Statements, which are obtained through separate procurement mechanisms.] These efforts are to support the Federal staff and may require subcontracting for program-specific expertise.
- d. Performs assessments of ES&H programs, policy, plans, procedures and training documents against laws, regulations, standards, DOE requirements, and internal objectives and targets and makes recommendations for improvements to the ES&H program.
- e. Provides safeguard and security assessments to protect NETL technology-specific information and knowledge from unauthorized release or unapproved transfer to U.S. or foreign entities. Activities may include, but are not limited to:
 - Develop critical and sensitive technology reports.
 - Conduct export compliance determinations and licensing.
 - Prepare technology-specific risk assessments for the NETL Safeguard and Security Awareness Program.
 - Develop appropriate export compliance training materials and provide training

2.5 *Program Support - Processes, Practices, and Procedures*

The Contractor shall provide program and business management expertise to support the Federal staff to develop and implement improved processes, practices and procedures for program execution. Recommended improvements must consider requirements to interface and coordinate with HQ and other program elements external to NETL. Work elements include, but are not limited to, the following activities:

- a. Develops consistent programmatic practices in NETL's conduct of operations, work planning, and control systems. Routinely assesses process operations across organizational elements for consistency, identifies opportunities for improvement and recommends best-in-class practices.
- b. Develops supporting documentation for a common set of written standard operating procedures that are based on sound program, portfolio, and project management principles. Specific work elements will consider the strategic management system associated with each program and sub-program, as well as regulatory requirements and the NETL Project Management Guidelines provided as a reference.
- c. Assists with the implementation of improved work processes, work flows, data and information management systems, and other supporting functions that will improve efficiency and effectiveness of programs, including the NETL ES&H program.
- d. Provides quality assurance and quality control services for program related documents and processes.

2.6 *Program Outreach and Communications*

The focus of this functional area is to provide services to NETL technical program areas. Services provided within this functional area require that the Contractor work within the NETL corporate structure and programmatic mandates for management of communications products, program documentation, research reports and outreach functions. The Contractor must coordinate and communicate among organizational elements at NETL, including the NETL Public Affairs Office and other contractors. The Contractor must ensure work products are compatible with NETL standards and work practices relating to **public** outreach and communication products, the external web site, NETL's information technology systems, and HQ information management systems. NETL maintains corporate public affairs and information technology organizations to ensure overall consistency in the laboratory's communication products. Work elements include, but are not limited to, the following activities:

- a. Conducts general outreach work and prepares narrative, visual and technology visualization materials and tools for internal and external customers and stakeholders including on-demand, short notice, detailed presentations, technical brochures and video productions. Produces the content for CDs or DVDs to capture impacts and success of programs or projects including yearly updates to program CDs (a compilation of project summary descriptions and an overview of program area) for key program areas.
- b. Assists the Government in developing partnerships and collaborations with the private sector and other government agencies to affect the commercialization and transfer of technology, and promote new initiatives.
- c. Develops, maintains, reviews, and continually enhances content related portions of the NETL website on behalf of NETL Offices and program technology areas, and supports project managers to populate project specific areas to provide timely and high quality information. As needed, assists in the development of technical content for new and existing portions of the website. This includes support for integration of new technologies, best practices and improved functionality and accessibility. Such work will be completed in coordination with NETL Public Affairs Office and Information Technology Division personnel.
- d. Develops, maintains and manages the content of program-specific related databases and information management systems to track and control technical work products. This may include investigating, recommending, and developing new systems/tools and/or improvements to existing systems.
- e. Assists in arranging, organizing and conducting conferences, topical training sessions on emerging energy issues, and review meetings. As requested, supports the technical preparations for and participation in selected conferences, meetings, and workshops. Activities may include: updating technical information to be used in displays and exhibits; developing technical content for success stories and other technical materials for distribution at conferences; providing technical personnel to staff conference exhibits and technically support conference attendees. Provide support for identifying and arranging for the participation of independent technical experts to serve as reviewers for peer review meetings.
- f. As needed, provides support for NETL relationship building efforts with universities, industry, and other strategic stakeholders. Assists in identifying opportunities and managing strategic partner relationships to fully leverage communication and outreach activities. Provides miscellaneous communications and outreach strategy development, execution and deployment support as needed.

3.0 TASK DESCRIPTIONS

The Contractor shall actively manage their workforce and the overall execution of work to ensure appropriate staffing of individual tasks, maintenance of staff knowledge and skills, integration of work

products, quality of work products, communications among tasks, and coordination within the program organizational structure(s). Management and oversight functions of assigned task orders by the contractor are facilitated by the development and maintenance of effective planning or procedural documents delineated below.

3.1 Organizational Planning and Management

The Contractor shall maintain a current Management Plan, and use this plan to manage the total work and individual task orders assigned under the contract. While the Management Plan is a deliverable under the contract, it must be updated and revised by the Contractor, as required, and reviewed at least annually, by both NETL and the Contractor, to ensure that it accurately reflects current estimated work load and significant changes in requirements. The Management Plan is to be the guiding document for the contractor's organization that delineates how the work is organized and defines the management, technical and administrative systems that will be used to meet the objectives of this contract. The Management Plan would specifically reference the contractor's management practices and procedures as appropriate for the conduct of the work. The contractor shall specifically include sections in the Management Plan that describe : 1) a high level Executive Summary, 2) the scope of work, 3) a work breakdown structure aligned with task orders, 4) an organizational work breakdown structure and associated staffing plan, 5) a communications plan delineating overall and task lines of communication and coordination requirements, 6) QA/QC practices for individual work products, 7) projected funding and costing profiles, once tasks are assigned and 8) metrics, success criteria and planned outcomes for the organization.

Annual updates to the plan shall be delivered to the DOE Task COR 30 days prior to the beginning of the fiscal year, based on integrated annual task planning between the Task COR(s) and the Contractor Task Manager (s). The DOE Contract COR shall review and approve the Management Plan prior to the start of the fiscal year.

3.2 Annual Task Planning and Management

Under this contract, the Government will provide specific annual guidance to the Contractor that identifies individual tasks that are to be funded for the Fiscal year. There shall be no individual subtasks identified within the contract structure; subtasks and lower level work elements shall be included in the Task Management Plan defined below.

The Contractor shall support and participate in the Government's annual planning process, such that the Government's annual guidance is clearly understood by both parties at the beginning of the Fiscal year. During this planning process, the Contractor shall develop a Task Management Plan that is approved by the Task COR and shall include:

1. Description of Task Approach
2. Work Breakdown Structure (WBS). Consideration should be given to a WBS dictionary or other means to clearly describe the components of work that comprise the task, including the work scope, schedule, and deliverables, cost budgets, and organization/staff responsibilities.
3. Schedule and cost for individual work elements
4. Critical milestones (not accomplishments or deliverables)
5. Staffing plan – Identify on-site and off-site personnel and resources to be applied to the task over the life of the task; must include qualifications of key management and technical personnel
6. Specific deliverables and date of delivery
7. Performance metrics and success criteria – mutually developed between the Task COR and the Contractor Task Manager

To facilitate annual planning the Government and the Contractor shall mutually identify those task work elements that are predictable, schedulable, and recurring from year to year. These work elements comprise

the Base Task activities that will be funded annually, and do not require renegotiation for the annual work scope for a task. Planning efforts should focus on the additions to and adjustments of annual work activities that are derived from DOE's annual planning and budget processes, which includes consideration of benefits, results of on-going programs and projects, and initiatives identified as a result of work products from this contract. Annual work activities may also be identified by other Federal agencies that are working cooperatively with NETL through Interagency Agreements. Effective, integrated planning between the Government and the Contractor staff is the key requirement for defining work elements and ensuring the work is properly staffed to provide the services identified in Section 2.0.

3.3 *Execution of Annual Tasks*

The Contractor shall execute work elements in accordance with the approved Annual Task Plans, as well as other unanticipated task orders assigned during the course of the Contract term.

3.4 *High Level Metrics Reporting*

The Contractor shall develop a High Level Metrics Reporting Plan that the Government will use to evaluate overall performance in meeting the requirements of the SOW. The High Level Metrics Reporting Plan summarizes the metric and its acceptable quality levels, it describes how performance will be monitored and how the results will be evaluated. The High Level Metrics Reporting Plan will be reviewed by DOE/NETL on a yearly basis and will be due 30 days after the beginning of the Fiscal year. At a minimum, the plan should address the following metrics:

- funds management and fiscal accountability
- adherence to staffing plans
- earned value assessment (or something) for each task order including cost and schedule variation
- work element completion targets (within budget and project period)
- adherence to task order schedule (for milestones and deliverables)
- attainment of success criteria and quality objectives for both task order outputs and contract outcomes

The metrics listed above are not meant to be comprehensive and are provided as minimum guidance. The contractor is encouraged to identify additional metrics that are applicable to the success of the program initiatives.

4.0 Glossary

4.1 Acronyms

<u>Acronym</u>	<u>Definition</u>
COR	Contracting Officer's Representative
DOE	U.S. Department of Energy
EEO	Equal Employment Opportunity
EEERE	Energy Efficiency and Renewable Energy
EPAct	Energy Policy Act
ES&H	Environment, Safety, and Health
FE	Fossil Energy
GPRA	Government Performance Results Act
HQ	Headquarters
ISM	Integrated Safety Management
ISO	International Organization for Standardization
NETL	National Energy Technology Laboratory
NEPA	National Environmental Policy Act

OE	Office of Electricity Delivery and Energy Reliability
OHSMS	Occupational Health and Safety Management Systems
OMB	Office of Management and Budget
PART	Program Assessment Rating Tool
PEIS	Programmatic Environmental Impact Statements
QA/QC	Quality Assessment/Quality Control
SOW	Statement of Work
PMA	President's Management Agenda
PPM	Program Performance and Management
RD&D	Research, Development and Demonstration
R&D	Research and Development
RDD&D	Research, Development, Demonstration and Deployment
WBS	Work Breakdown Structure

4.2 Words/Phrases

<u>Words/Phrases</u>	<u>Definition</u>
Government	The U.S. DOE or its duly authorized contracting and/or technical representative
Off-Site	Any location not on one of the NETL sites as defined in "on-site" below.
On-Site	Federally-owned or leased property within the defined boundaries of the sites at Albany, OR; Fairbanks, AK; Morgantown, WV; Pittsburgh, PA; and Tulsa, OK, including, in the case of Morgantown, NETL leased space in the Research Ridge complex immediately adjacent to the boundary.
Program	A program is an organized set of ongoing activities directed toward a common purpose or goal undertaken in support of an assigned mission area. Typically, a program is a group or portfolio of related projects managed in a coordinated way to accomplish broad goals over a relatively long period of time (e.g., a 10 to 15 year planning horizon), to which individual projects contribute.
Project	A project is defined as an individual activity conducted under the laboratories programs and sub-programs. A project is a planned undertaking such as a definitely formulated piece of research.
Electronic Reading Room	All references in the Statement of Work and the Solicitation that refer to the "Electronic Reading Room" indicates information that will be available only during the solicitation phase of this acquisition. This site will not be maintained after contract award. http://www.netl.doe.gov/business/solicit/ssc208/index.html